


CLAIMS

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1. A vacuum packaging machine for performing a vacuum sealing operation on product packages, comprising a vertical stack of vacuum chambers each arranged to receive at least one unsealed product package and operable to perform an independent vacuum sealing operation on the at least one product package.
2. A vacuum packaging machine according to claim 1, further comprising a conveyor arrangement operable to load and unload a selective vacuum chamber with the at least one product package, the machine being operable to operate respective vacuum chambers to perform the vacuum sealing operation while the conveyor arrangement is operated to load and unload another vacuum chamber.
3. A vacuum packaging machine according to claim 2, wherein the machine is operable to operate the conveyor arrangement to load and unload the vacuum chambers in a cyclical sequence and synchronously to operate the respective vacuum chambers to perform the vacuum sealing operation on the at least one product packages after loading.
4. A vacuum packaging machine according to claim 3, wherein the number of vacuum chambers is sufficient relative to the duration of the vacuum sealing operation to allow the conveyor arrangement to operate continuously.
5. A vacuum packaging machine according to any one of claims 2 to 4, wherein the conveyor arrangement includes at least one in-feed conveyor operable to load a selected vacuum chamber with the at least one product package.
6. A vacuum packaging machine according to claim 5, wherein the at least one in-feed conveyor is vertically movable to select the vacuum chamber to be loaded.

7. A vacuum packaging machine according to claim 6, wherein the conveyor arrangement includes a plurality of in-feed conveyors which are vertically movable together to select the vacuum chamber to be loaded.

8. A vacuum packaging machine according to claim 7, wherein the vacuum chambers have a regular spacing and the in-feed conveyors have a relative spacing equal to a the spacing between the vacuum chambers.

9. A vacuum packaging machine according to any one of claims 5 to 8, further comprising an internal conveyor in each vacuum chamber extending from the at least one in-feed conveyor

10. A vacuum packaging machine according to claim 9, wherein the vacuum chambers each have a sealing bar for sealing the at least one product package extending along the internal conveyor.

11. A vacuum packaging machine according to any one of claims 5 to 10, wherein the conveyor arrangement includes at least one out-feed conveyor operable to unload a selected vacuum chamber with the at least one product package.

12. A vacuum packaging machine according to claim 11, wherein the at least one out-feed conveyor is vertically movable to select the vacuum chamber to be unloaded.

13. A vacuum packaging machine according to claim 12, wherein the conveyor arrangement includes a plurality of out-feed conveyors which are vertically movable together to select the vacuum chamber to be unloaded.

14. A vacuum packaging machine according to claim 13, wherein the vacuum chambers have a regular spacing and the out-feed conveyors have a relative

spacing equal to the spacing between the vacuum chambers.

15. A vacuum packaging machine according to claim 13 or 14, wherein the out-feed conveyors have a modular construction allowing out-feed conveyors to be added and removed.

16. A vacuum packaging machine according to claim 7 or any claim appendant to claim 7, wherein the in-feed conveyors have a modular construction allowing in-feed conveyors to be added and removed.

17. A vacuum packaging machine according to any one of the preceding claims, wherein the vacuum chambers have a modular construction allowing vacuum chambers to be added to and removed from the vertical stack.

18. A vacuum packaging machine according to any one of claims 2 to 17, wherein the plurality of vacuum chambers are movable together relative to the conveyor arrangement to select the vacuum chamber to be loaded and unloaded.

19. A vacuum packaging machine according to any one of the preceding claims, wherein the vacuum chambers each have a sealing bar arranged along a side of the respective vacuum chamber for sealing the at least one product packages.

20. A vacuum packaging machine according to any one of the preceding claims, wherein each vacuum chamber comprises at least two parts which are relatively vertically movable to open and close the vacuum chamber.

21. A vacuum packaging machine according to claim 20, wherein each vacuum chamber comprises a base and a cover disposed vertically above the base, wherein the cover is fixed and the base is vertically movable to open and close the vacuum chamber.